Claims

1. A steel tube comprising air hardenable steel and a longitudinal welded seam.
2. The steel tube of claim 1, wherein the air hardenable steel is stainless.
3. The steel tube of claim 2, wherein the air hardenable stainless steel is a martensitic stainless steel.
4. The steel tube of claim 3, wherein the martensitic stainless steel is a 400 series stainless steel.
5. The steel tube of claim 4, wherein the 400 series stainless steel is 410.
6. A method of producing an air hardenable steel tube, the method comprising:
   selecting a strip stock of air hardenable steel;
   roller forming said strip stock into a tube with adjacent edges;
   welding said adjacent edges to form a seam;
   and controlling the cooling rate of the welded seam.
7. The method of claim 6, wherein the air hardenable steel strip stock is stainless steel.
8. The method of claim 7, wherein the stainless steel is a martensitic stainless steel.
9. The method of claim 7, wherein the stainless steel is a 400 series stainless steel.
10. The method of claim 7, wherein the stainless steel is 410.
11. The method of claim 6, wherein the air hardenable steel strip stock is in an annealed state prior to being roller-formed.
12. The method of claim 6 further comprising sizing and straightening the tube after controlling the cooling rate of the welded seam.
13. The method of claim 6 further comprising heat-treating the seam-welded air hardenable steel tube to a high strength condition.
14. The method of claim 6, wherein the welding process is gas tungsten arc welding.
15. The method of claim 6 further comprising laminating a facing layer on the strip stock prior to roller forming, whereby the method produces a tube with multiple layers.
16. A method of assembling tubes into a structure, the method comprising joining two or more parts including one or more seam-welded air hardenable steel tubes into an assembly.

17. The method of claim 16 further comprising heat-treating the whole assembly after joining to induce a high strength condition in the air hardenable parts of the assembly.
18. The method of claim 16 further comprising heat-treating said at least one seam-welded air hardenable steel tubes to a high strength condition prior to joining in the assembly.
19. The method of claim 16, wherein the assembly is a load-bearing structure.
20. The method of claim 16, wherein the assembly is tubing for oil production.
21. The method of claim 16, wherein the assembly is part of a heat exchanger.
22. The method of claim 16 further comprising applying a corrosion-resistant facing layer on the inner and/or the outer side of one or more of the steel tubes.
23. A load-bearing structure, the structure comprising at least one seam-welded air hardenable steel tube.
24. The structure of claim 23, wherein the structure comprises an assembly of two or more parts including at least one seam-welded air hardenable steel tube, and the entire structure is subjected to heat treating after assembly to induce a high strength condition in the air hardenable parts of the structure.
25. The structure of claim 23, wherein said at least one seam-welded air hardenable steel tube has been heat treated to a high strength condition prior to joining in the structure.
26. The structure of claim 23, wherein said at least one seam-welded steel tube is of a stainless steel.
27. The structure of claim 26, wherein said at least one seam-welded stainless steel tube is of a martensitic stainless steel.
28. The structure of claim 27, wherein the martensitic stainless steel is of the 400 series stainless steels.
29. The structure of claim 28, wherein the 400 series stainless steel is 410.
30. The structure of claim 23, wherein one or more of the steel tubes in the structure includes a corrosion-resistant facing layer on its inner and/or its outer side.
31. The structure of claim 23, wherein the structure is stationary.
32. The structure of claim 31, wherein the structure is a load bearing beam or truss.

33. The structure of claim 31, wherein the structure is a bridge.
34. The structure of claim 31, wherein the structure is an elevated roadbed or railway.
35. The structure of claim 31, wherein the structure is a building.
36. The structure of claim 31, wherein the structure is an offshore oil rig.
37. The structure of claim 31, wherein the structure is a chair, table, or other article of furniture.
38. The structure of claim 23, wherein the structure is a moving vehicle.
39. The structure of claim 38, wherein the structure is a motor vehicle.
40. The structure of claim 38, wherein the structure is an aircraft.
41. The structure of claim 38, wherein the structure is a bicycle.
42. The tube of claim 1 wherein the tube is a fluid handling device, the device comprising at least one seam-welded air hardenable steel tube.
43. The fluid handling device of claim 42, wherein the device comprises an assembly of two or more parts including at least one seam-welded air hardenable steel tube, and the entire assembly is subjected to heat treating after assembly to induce a high strength condition in the air hardenable parts of the assembly.
44. The fluid handling device of claim 42, wherein said at least one seam-welded air hardenable steel tube is heat treated to a high strength condition prior to joining in the device.
45. The fluid handling device of claim 42, wherein said at least one seam-welded steel tube is of a stainless steel.
46. The fluid handling device of claim 45, wherein said at least one seam-welded stainless steel tube is of a martensitic stainless steel.
47. The fluid handling device of claim 46, wherein the martensitic stainless steel is of the 400 series stainless steels.
48. The fluid handling device of claim 47, wherein the 400 series stainless steel is 410.
49. The fluid handling device of claim 42, wherein one or more of the seam-welded air hardenable steel tubes includes material configured to contact a corrosive environment.

50. The fluid handling device of claim 49, wherein the contacting material is a layer on the inner and/or the outer side of the seam-welded air hardenable steel tube.
51. The fluid handling device of claim 49, wherein the contacting material is laminated to the seam-welded air hardenable steel tube.
52. The fluid handling device of claim 49, wherein the contacting material is applied to one or both sides of the strip stock prior to rolling it into a tube.
53. The fluid handling device of claim 49, wherein the contacting material includes a highly corrosion-resistant grade of stainless steel.
54. The fluid handling device of claim 49, wherein the contacting material is a specialty martensitic stainless steel alloy including nickel and molybdenum.
55. The fluid handling device of claim 42, wherein the device is a deepwater oil riser.
56. The fluid handling device of claim 42, wherein the device is oil well casing or tubing.
57. The fluid handling device of claim 42, wherein the device is a sucker rod for oil wells.
58. The fluid handling device of claim 42, wherein the device is a fluid transfer pipe.
59. The fluid handling device of claim 42, wherein the device is a gas pipeline.
60. The fluid handling device of claim 42, wherein the device is a heat exchanger.
61. The air hardenable steel tube of claim 1 further comprising material configured to contact a corrosive environment.
62. The air hardenable steel tube of claim 61, wherein the contacting material is a layer on one or both sides of the tube.
63. The air hardenable steel tube of claim 61, wherein the contacting material is laminated to the tube.
64. The air hardenable steel tube of claim 61, wherein the contacting material is applied to one or both sides of the strip stock prior to rolling it into a tube.
65. The air hardenable steel tube of claim 61, wherein the contacting material includes a highly corrosion-resistant grade of stainless steel.

66. The air hardenable steel tube of claim 61, wherein the contacting material is a specialty martensitic stainless steel alloy including nickel and molybdenum.
67. The seam-welded air hardenable steel tube of claim 1, wherein the tube is hydroformed.
68. The steel tube of claim 67, wherein the air hardenable steel tube is of a stainless steel.
69. The steel tube of claim 68, wherein the air hardenable stainless steel tube is of a martensitic stainless steel.
70. The steel tube of claim 69, wherein the martensitic stainless steel is of the 400 series stainless steels.
71. The steel tube of claim 70, wherein the 400 series stainless steel is 410 stainless steel.
72. The steel tube of claim 67, further comprising a corrosion-resistant facing layer on the inner and/or the outer sides of the tube.
73. A tube mill configured for producing air hardenable steel tubing, the tube mill comprising:
forming rollers;
seam welder;
cooling-rate controller; and
sizing and straightening rollers.
74. The tube mill of claim 73, wherein the tube mill is configured for producing air hardenable stainless steel tubing.
75. The tube mill of claim 73, wherein the cooling-rate controller is a heating device positioned downstream of the seam welder.